REMARKS

1. Status of Claims and Amendments.

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested. Claims 1, 3-10, 12-14, 16-19 and 26-31 are pending, and claims 2, 11, 15, 20-25 are canceled in the present application.

Claims 1, 10, 16, and 26 are amended. Claims 16 and 26 are amended to incorporate the deodorizing property into the related independent claims, and Claim 26 is further amended to correct antecedent basis in Claim 26.

Claims 1 and 10 were amended to further add the limitations that the floor mat is formed with a solid and reusable sheet having a recoverable deodorization capacity when washed alone or with alkaline or acidic substances; the sheet further having randomly formed, meandering and overlapped folds of various shapes and sizes, a plurality of rigids and grooves formed on the folds to make walls for assuring a sleeping floor, excretion place, and birth and breeding place for the small animal. The mat has a temperature holding property sufficient to hold the body temperature of the small animal. No new matter has been added. Support for these amendments can be found throughout the specification and drawings especially at paragraphs [0044], [0047]-[0051], [0063]-[0067], and the Abstract.

2. Rejection under 35 USC §103 for Sugo in view of Ito et al.

The Examiner has rejected claims 1, 3, 5-9, and 27 as being unpatentable over U.S. Patent No. 5,641,482 ("Sugo") in view of U.S. Patent No. 5,939,088 ("Ito"). The Examiner stated that Sugo fails to disclose a sheet having a flexibility to a degree that can wrap the body of the small animal and a size that covers at least the entire abdomen of the small animal, where the flexibility and size are such that the sheet is capable of being seamlessly

folded onto itself. The Examiner further states that Ito discloses a mat having a sheet with such flexibility for the function described, and it would have been obvious to combine the composition in Sugo with the flexibility in the Ito reference. Applicants traverse the rejection and submit that the claims, as amended, in view of Sugo and Ito would not have been obvious at the time the invention was made.

a. Claim 1-Sugo and Ito Teach Away from what Applicants Claim

The Applicant has amended the claims to more clearly recite the present invention. Applicant now claims a solid and reusable sheet having a recoverable deodorization capacity when washed alone or with alkaline or acidic substances. The claimed sheet further includes randomly formed, meandering and overlapped folds of various shapes and sizes, and a plurality of rigids and grooves formed on the folds to make walls. Animal excrements are trapped in the ridges and grooves formed on the folds. The present invention, as being different from other mats that use small pieces such as chips for the floor mat, prevents excrements from being spread over the floor as the small animal moves around the cage along with small chips that are adhered with their excrements, thereby avoiding deterioration of the rearing environment. Furthermore, the formation of the folds assists the small animal in hiding in the recesses or clearances to provide a secure living environment suitable for breeding the animal.[See, Applicant's disclosure at [0049]-[0051]].

In the present Office Action, the Examiner characterizes Sugo as disclosing "some degree of temperature holding property," [07/24/09 Office Action at p. 2]. Sugo is silent as to a temperature holding property sufficient to hold the body temperature of small animals. The Examiner takes unsupported Official Notice that the composition in Sugo has such a temperature holding property. It is well settled that Official Notice unsupported by documentary

evidence should only be taken by an examiner where the facts asserted are well-known, or to be common knowledge in the art and are capable of instant and unquestionable demonstration as being well-known. See, *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). The examiner fails to specifically point to where the Sugo reference discloses such a thermal property, or some other reference that shows such a temperature holding property is well-known.

In addition, the record clearly contradicts reliance on such Offical Notice. As disclosed in the Sugo reference, the base material to be used is appropriately selected from among various materials according to the end use. [See, Sugo at Col. 1, lines 55-65]. This statement in Sugo questions the end use, and whether the base material may or may not contain, for example, a "thermo-conductive" property. It is well know that carbon fillers in base materials such as polyethylene or polypropylene provide thermal conductive materials, which are unsuited for use in the present invention.. Additionally, depending on the thickness of the composition, even without carbon fibers, the material may not provide sufficient thermal property as now claimed.

Lastly, Sugo discloses the use of a mass of spheres or flaky formed articles for the end use of a toilet for cats. This disclosure teaches away from what the applicant's claim because the applicant specifically claims a solid sheet to avoid the disadvantages of flakes and spheres. Flakes and spheres are also unsuitable to provide a thermal property as claimed. It is well settled that prior art references must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)

b. Sugo and Ito Do Not Teach or Suggest a Sheet having Randomly Formed, Meandering and Overlapped folds of various Shapes and Sizes

Sugo and Ito do not teach or suggest a sheet having randomly formed, meandering and overlapped folds of various shapes and sizes, where a plurality of rigids and grooves are formed on the folds to make walls for assuring a sleeping floor, excretion place, and birth and breeding place for the small animal as claimed by the applicant. In fact, Sugo and Ito teach away from what the Applicant now claims.

Sugo does not disclose a flexibility property or a sheet capable of being seamlessly folded on itself. [07/24/09 Office Action at p. 2]. The Ito reference does not fill in the deficiencies of the Sugo reference. Ito discloses a sheet or bag having a capsule into which a liquid or powder is filled and when broken by external forces disperses the component to indicate an exact point where the sheet got wet or damaged.[See, Ito at Col. 2, lns. 10-50] The examiner points to Ito's Fig. 4 to demonstrate Ito's flexibility of a sheet being folded onto itself seamlessly. Ito fails to teach or suggest randomly formed, meandering and overlapped folds of various shapes and sizes, where a plurality of rigids and grooves are formed on the folds to make walls for the purposes claimed. In fact, Ito teaches away from such a structure by disclosing uniform folds of same shapes and sizes as shown in Ito's Figure 4. Ito does not teach or suggest the use of any such folded structure as the applicant claims.

In the applicant's invention, the various shapes and sizes of the recesses or clearances hide the animal to provide security. Excrements are trapped in ridges and grooves formed on the folds. Walls formed with the randomly folded, meandering and overlapped mat assure a sleeping floor, excretion place, and birth and breeding place for the small animal. [See, Applicant's disclosure [0047]-[0051], and Abstract].

Specifically, Sugo teaches away from what the applicant claims because the flakes and spheres used in Sugo for excrements can not be folded. In addition, Sugo fails to disclose any such folding as the applicant claims. Ito's Figure 4 teaches away from what the applicant claims by disclosing only a uniform fold. In addition, Ito lacks any ridges or grooves on the folds to make walls, and randomly formed meandering and overlapping folds of various shapes and sizes.

References must be taken in their entireties, including those portions which argue against obviousness. For at least these reasons, withdrawal of the rejection is respectfully requested.

c. Claims 3&7- Sugo is Silent as to a Water Absorption Property;Sugo and Ito Teach Away from the Deodorization Property Claimed

Applicant repeats the previous arguments made in the above sections and add the following remarks.

In the present Office Action, the Examiner characterizes Sugo as disclosing a "water absorption property" [See, Sugo at Col 1, ln 62]. This passage in Sugo merely refers to absorption of "harmful substances." There is no teaching or suggestion in Sugo for water absorption. In addition, Ito teaches away from water absorption by disclosing a sheet with no fluid permeability. [Ito at Col. 2, lns. 1-5].

The Applicant claims a solid and reusable sheet having a recoverable deodorization capacity when washed alone or with alkaline or acidic substances. Clearly, there are substantial structural and functional differences between Sugo and Ito and what the applicant now claims. Sugo teaches away from what the applicant claims because Sugo discloses the use of a non-solid mass of spheres or flakes.

In addition, Sugo is silent as to using an alkaline substance to recover deodorization capacity. Ito teaches away because the sheet disclosed in Ito can not be reused. Once the capsule is broken in Ito indicating the sheet is wet, the sheet can not be reused. [See Ito at Col. 2, lns 10-17]. Withdrawal of the rejection is respectfully requested.

d. Claims 5&8 &27- Sugo is Silent as to a Sheet of Cellulose Graft Polymerized

Applicant repeats the previous argument made in the above sections and add the following remarks.

Sugo discloses a reactive monmer graft polymerized to the formed article. The reactive monomers disclosed in the Sugo reference are glycidyl methacrylate, glycidyl acrylate, styrene and sodium styrenesulfonate.[Sugo at col 2. lns 9-18].

The applicant claims a sheet formed of an improved cellulose fabric. The cellulose has carboxyl groups chemically bound and formed with graft polymerization. Cellulose is an organic compound with the chemical formula $(C_6H_{10}O_5)_n$, a polysaccharide consisting of a linear chain of several hundred to over ten thousand linked D-glucose units. As shown above, Sugo does not teach or suggest such a sheet made of cellulosehaving carboxly groups bound formed with graft polymerization. Sugo discloses monomers that are acylic and styrene based. Similarly, Ito is silent as to such a sheet made of this cellulose composition. For at least these reasons withdrawal of the rejection is respectfully requested.

e. Claims 6&9- Sugo and Ito Do Not Disclose the Range of Carboxyl Groups

Applicant repeats the previous argument made in the above sections and add the following remarks.

The Examiner stated Sugo teaches amounts of carboxyl groups per dry fabric. However, Sugo as modified by Ito does not specifically teach the improved cellulose fabric contains the

range of millimole carboxyl groups per gram of dry fabric. The examiner further states routine testing and general experimental conditions would discover the optimum or workable ranges.

Applicant traverses the rejection and the examiners interpretation of the cited references. First, Sugo does not teach an amount of carboxyl group as the applicant claims. The passages in Col. 2 cited by the examiner in Sugo refer to acrylic and styrene based monomers not cellulose as claimed. Example 2 in Sugo cited by the examiner refers to polypropylene and not cellulose as claimed by the applicant.

Applicant further objects to the examiners characterization that the millimole ranges of carboxyl groups could be found by routine testing and general experimentation. It is well settled that a particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result- effective variable.). Similarly, neither Sugo or Ito recognize the improved cellulose composition of the sheet. Therefore, the optimization of the carboxyl groups with the cellulose is not recognized. Withdrawal of the rejection is respectfully requested.

3. ***Rejection under 35 USC §103 for Sugo in view of Ito in further view of Newton-Claims 4 & 28***

Claims 4 and 28 were rejected over Sugo in view of Ito and further in view of U.S. Patent Publication No. 2004/0163603 ("Newton"). The Examiner stated both Sugo and Ito

et al. are silent about the sheet having a tearing resistance. The Examiner further stated that Newton discloses a pet pad cover comprising a sheet that is made out of a tear resistant material.[See Newton at Summary of Invention [0011]]. The Examiner concludes that it would have been obvious to add the tear resistance of Newton to the sheet of Sugo modified by Ito et al in order to prevent an animal from tearing the sheet.

Applicants repeat the same arguments with respect to Sugo and Ito et al previously made and add the following remarks regarding Newton. Newton discloses a multipurpose disposable contour sheet. Newton's disposable contour sheet is formed of a single flat unbroken and unfolded rectangular sheet that is resistant to soiling snagging, running and tearing in combination with a strip of elastic tape attached along substantially the entirety of a peripheral edge of the fabric sheet. Newton merely discloses a disposable contour cover sheet and is silent as to having a sheet with tearing resistant properties as the Applicant claims. In fact, Newton teaches away from what the Applicant claims by disclosing a disposable and unfolded sheet. Newton does not address the tearing resistant property needed for a sheet that is reusable and folded as the applicant claims. In fact, Newton's tear resistance, if any, would be far less than needed for the applicant's invention that has a reusuable and folded sheet. Newton does not even contemplate, teach or suggest such tear resistance for a reusuable and folded sheet as the Applicant claims.

Withdrawal of the rejection is respectfully requested.

4. Rejection under 35 USC §103 for Sugo in view of Ito and Otsuji

Claims 10, 13, 14, 16-19, 26 29 and 31 were rejected over Sugo in view of Ito el al and further in view of U.S. Patent Publication 2001/0009142 ("Otsuji et al"). The Examiner stated Sugo and Ito are silent as to a small animal rearing cage comprising a rearing box having a

floor and a wall provided at the circumference of the floor. The examiner states that Otsuji discloses such a cage and that it would have been obvious to combine the teaching of Sugo and Ito with Otsuji to obtain the applicant's invention.

Applicant traverses the rejection and repeats the arguments previously made above with respect to Sugo and Ito et al. Sugo and Ito do not teach or suggest a sheet with flexibility and folding properties as the applicant claims as previously explained above. Also as previously explained, Sugo and Ito also do not teach or suggest a sheet with temperature holding properties as the applicant claims. Applicant adds the following remarks regarding the Otsuji reference.

Otsuji discloses an absorbent mat for excreta treatment. As shown in Figure 1 of Otsuji, a mat (1) is placed in side a tray (2). A draining board (3) is placed on top of mat (1) to allow excreta to flow into the absorbent mat. [See, Otsuji at [0063]-[0064]].

Otsuji does not disclose a rearing box having a floor and a wall to restrain a small animal therein as claimed. In fact, the structure in Otsuji could not restrain the animal at all because there are no walls in the tray (2) to prevent a small animal from escaping the structure. In contrast, the Applicant claims a rearing box having a floor and a wall for restraining the small animal within the rearing cage.

Otsuji does not appreciate the existence of the problem solved by the Applicant's invention. One skilled in the art would not have looked to absorbent mat art to solve a problem related to a rearing cage for small animals. Furthermore, even if the Examiner's proposed modifications were made, a structure as disclosed in view of Sugo, Ito and Otsuji would make a structure unsatisfactory for its intended purposes. The tray in Otsuji is incapable of rearing a small animal. In addition the absorbent mat in Otsuji is held in place by a draining board (3)

making folding of the mat (1) impossible. As previously explained, Sugo and Ito do not fill these deficiencies of the Otsuji reference. Sugo does not disclose the folding or improved cellulose fabric as claimed. Ito also does not disclose the folds as claimed, and in fact teaches away from such folds by requiring a component released by breaking of caps to indicate contact, thereby requiring the sheet to lie flat. Folds as claimed by the applicant would interfere with the disclosed purpose in Ito et al. Therefore, withdrawal of the rejection is, therefore, respectfully requested.

a. Claims 13& 18- Sugo and Ito Do Not Disclose the Range of Carboxyl Groups

Applicant repeats the previous argument made in the above sections and add the following remarks.

The Examiner stated Sugo teaches amounts of carboxyl groups per dry fabric. However, Sugo as modified by Ito does not specifically teach the improved cellulose fabric contains the range of millimole carboxyl groups per gram of dry fabric. The examiner further states routine testing and general experimental conditions would discover the optimum or workable ranges.

Applicant traverses the rejection and the examiners interpretation of the cited references. As previously explain, Sugo does not teach an amount of carboxyl group as the applicant claims. The passages in Col. 2 cited by the examiner in Sugo refer to acrylic and styrene based monomers not cellulose as claimed. Example 2 in Sugo cited by the examiner refers to polypropylene and not cellulose as claimed by the applicant.

Applicant further objects to the examiners characterization that the millimole ranges of carboxyl groups could be found by routine testing and general experimentation. Neither Sugo or Ito recognize the improved cellulose composition of the sheet. Therefore, the optimization of the carboxyl groups with the cellulose is not recognized. Withdrawal of the rejection is respectfully requested.

b. Claims 14, 17 & 29- Sugo is Silent as to a Sheet of Cellulose Graft Polymerized

Applicant repeats the previous argument made in the above sections and add the following remarks.

As previously explained, Sugo discloses a reactive monmer graft polymerized to the formed article. The reactive monomers disclosed in the Sugo reference are glycidyl methacrylate, glycidyl acrylate, styrene and sodium styrenesulfonate.[Sugo at col 2. lns 9-18].

The applicant claims a sheet formed of an improved cellulose fabric. The cellulose has carboxyl groups chemically bound and formed with graft polymerization. Cellulose is an organic compound with the chemical formula $(C_6H_{10}O_5)_n$, a polysaccharide consisting of a linear chain of several hundred to over ten thousand linked D-glucose units. As shown above, Sugo does not teach or suggest such a sheet made of cellulosehaving carboxly groups bound formed with graft polymerization. Sugo discloses monomers that are acylic and styrene based. Similarly, Ito is silent as to such a sheet made of this cellulose composition. For at least these reasons withdrawal of the rejection is respectfully requested.

c. Claims 16 & 26- Sugo is Silent as to a Water Absorption Property;Sugo and Ito Teach Away from the Deodorization Property Claimed

Applicant repeats the previous arguments made in the above sections and add the following remarks.

Sugo merely refers to absorption of "harmful substances." There is no teaching or suggestion in Sugo for water absorption. In addition, Ito teaches away from water absorption by disclosing a sheet with no fluid permeability. [Ito at Col. 2, lns. 1-5]. Both Ito and Otsuji teach away from what the applicant claims by disclosing a disposable one time use arrangement. [See, Ito at Col. 2, lines 10-18; Otsuji at [0006]].

The Applicant claims a solid and reusable sheet having a recoverable deodorization capacity when washed alone or with alkaline or acidic substances. Clearly, there are substantial structural and functional differences between the references cited and what the applicant now claims. Sugo teaches away from what the applicant claims because Sugo discloses the use of a non-solid mass of spheres or flakes.

In addition, Sugo is silent as to using an alkaline substance to recover deodorization capacity. Ito and Otsuji teach away because the materials disclosed are meant for one time use. Once the capsule is broken in Ito indicating the sheet is wet, the sheet can not be reused. [See Ito at Col. 2, lns 10-17]. Withdrawal of the rejection is respectfully requested.

d. Claims 19 & 31-Rejections Based on Scale of Patent Drawing is Irrelevant

The Examiner stated Figure 4 in Ito appeared to show a larger sheet than the tray in Otsuji. The applicant traverses the rejections and requests reconsideration in view of the following remarks. It is well settled that when a reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. See *Hockerson-Halberstadt, Inc. v. Avia Group Int'l*, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000). The examiner can not fill the deficiencies of the Otsuji reference by pointing to a drawing in the Ito reference, and arguing that the scale of the drawing in the Ito reference shows a larger sheet than the tray in the Otsuji reference. All of the references cited teach away from what the applicant claims.

The Otsuji reference shows an absorbent material (1) within the confines of tray (2). In the Ito and Sugo references, there is no disclosure as to what the applicant claims. In fact, Ito teaches away since the Ito reference requires a material to indicate an occurrence of some type, and it would be against the purpose stated in Ito to have such an indicator sheet larger than the

contents contained. Sugo teaches away from what the applicants claim because it discloses a mass of spheres or flakes for the material. It would not make sense for this material to be larger than a container it is in since the sphere or flake material would serve no purpose. For at least there reasons withdrawal of the rejection is respectfully requested.

5. Rejection under 35 USC §103 for Sugo as modified by ito and Otsuji and further in view of Newton-Claims 12 & 30

Claims 12 & 30 were rejected over Sugo as being unpoatentabole over Sugo as modified by Ito et al and Otsuji et al as applied to claim 10 and further in view of Newton. Applicants traverse the rejection and contend a *prima facie* case of obviousness has not been made.

Applicants repeat the same arguments previously made above. Newton's disposable contour sheet is formed of a single flat unbroken and unfolded rectangular sheet that is resistant to soiling snagging, running and tearing in combination with a strip of elastic tape attached along substantially the entirety of a peripheral edge of the fabric sheet. Newton merely discloses a disposable contour cover sheet and is silent as to having a sheet with tearing resistant properties as the Applicant claims.

In fact, Newton teaches away from what the Applicant claims by disclosing a disposable and unfolded sheet.[See Newton Summary of Invention]. Newton does not address the tearing resistant property needed for a sheet that is reusable and folded as the applicant claims. In fact, Newton's tear resistance, if any, would be far less than needed for the applicant's invention that has a reusuable and folded sheet. Newton does not even contemplate, teach or suggest such tear resistance for a reusuable and folded sheet as the Applicant claims.

Clearly, as shown above, Newton has substantial structural and functional differences from what the Applicants claim. Newton teaches away from having such a re-useable tear resistant sheet as the Applicants claim. The material disclosed in Newton illustrates tear resistance for the disposable embodiment only [See Newton at [0033]].

Even if the apparatus was modified as the Examiner suggested, the above combination of references would not have made the Applicants invention obvious since the apparatus would be rendered inoperable. The mat taught in Newton can only operate if it is unfolded. There are no teachings or suggestions in the above references to make a folded sheet as the Applicant now claims.

For at least these reasons, withdrawal of the rejection is respectfully rejected.

CONCLUSION

Based on the foregoing amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims and allowance of the present application.

If any issues remain, or if the Examiner has any suggestions for expediting allowance of this application, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below. Favorable reconsideration is respectfully requested.

AUTHORIZATION

The Commissioner is hereby authorized to charge any fees which may be required for consideration of this Amendment or credit any overpayment to Deposit Account No. **50-1145**, Order No. 704076.00000. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

Respectfully submitted,
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